

AD-A090 608

AIR FORCE ENGINEERING AND SERVICES CENTER TYNDALL AF--ETC F/6 13/2
ENVIRONICS CUMULATIVE TECHNICAL PUBLICATIONS LISTING, 1968-1979--ETC(U)
DEC 79 M 6 MACNAUGHTON
AFESC/ESL-TR-80-06

UNCLASSIFIED

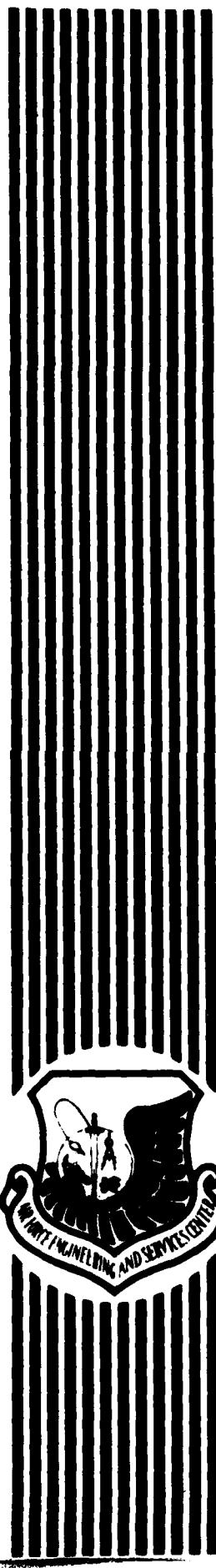
NL

| () |
AE
AFSC/ESL

END
DATE
FILED
11 80
DTIC

WC FILE COPY

AD A090608



(2) LEVEL II

ESL-TR-80-06

ENVIRONICS CUMULATIVE TECHNICAL PUBLICATIONS LISTING, 1968-1979

MICHAEL G. MACNAUGHTON
ENVIRONICS DIVISION
ENVIRONMENTAL SCIENCES BRANCH

DECEMBER 1979
FINAL REPORT

DTIC
ELECTED
S OCT 21 1980 D
B

APPROVED FOR PUBLIC RELEASE: DISTRIBUTION UNLIMITED



ENGINEERING AND SERVICES LABORATORY
AIR FORCE ENGINEERING AND SERVICES CENTER
TYNDALL AIR FORCE BASE, FLORIDA 32403

80 10 16 158

NOTICE

Please do not request copies of this report from
HQ AFESC/RD (Engineering and Services Laboratory).
Additional copies may be purchased from:

National Technical Information Service
5285 Port Royal Road
Springfield, Virginia 22161

Federal Government agencies and their contractors
registered with Defense Technical Information Center
should direct requests for copies of this report to:

Defense Technical Information Center
Cameron Station
Alexandria, Virginia 22314

UNCLASSIFIED

~~SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)~~

DD FORM 1 JAN 73 1473

UNCLASSIFIED

~~SECURITY CLASSIFICATION OF THIS PAGE WHEN Data Entered~~

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

Engineering Development Office (CERDO), Tyndall AFB, Florida. Because of the continued reorganizations, Technical reports of the Environics Division carry the report numbers of the respective organization. Included is a list of the publications, by document number, giving the title, author, and date of publication.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

PREFACE

This effort was performed under Program Element 62601F Project 1900. The compilation of reports was accomplished by Sgt Gregory Urda of the Environmental Sciences Branch, Engineering and Services Laboratory, Air Force Engineering and Services Center, Tyndall AFB FL. This compilation represents Technical Reports of the Environics Division since its beginning at the Air Force Weapons Laboratory in 1968. All Technical Reports listed are available from DTIC and many of the more current reports are available from the National Technical Information Service (NTIS).

This report has been reviewed by the Public Affairs Office and is releasable to the National Technical Information Service (NTIS). At NTIS it will be available to the general public, including foreign nationals.

This technical report has been reviewed and is approved for publication.

Michael G MacNaughton

MICHAEL G. MACNAUGHTON, LtCol, USAF, BSC
Chief, Environmental Sciences Branch

Emil C. Frein

EMIL C. FREIN, LtCol, USAF
Chief, Environics Division

ROBERT E. BRANDON
Dep Dir, Engineering & Services
Laboratory

DTIC
ELECTE
S OCT 21 1980 D
B

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC Rep	<input type="checkbox"/>
Unrestricted	<input type="checkbox"/>
Jurisdiction	<input type="checkbox"/>
By	
Distribution/	
Availability Codes	
Avail and/or	
Dist	Special
A	

TABLE OF CONTENTS

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
I	INTRODUCTION.....	1
II	ENVIRONICS PUBLICATIONS LIST.....	2

SECTION I

INTRODUCTION

The Environics Division has been responsible for environmental quality research and development since its inception at the Air Force Weapons Laboratory in 1967. Research and development is performed in the areas of environmental chemistry, pollution monitoring, waste treatment, air pollution control, modeling, planning and environmental assessment. During its existence the Environics Division has been part of numerous organizations beginning with the Air Force Weapons Laboratory. With consolidation of civil engineering facilities research at Tyndall AFB FL, Environics became part of the Air Force Civil Engineering Center. This move was followed by organizational changes to Det 1, HQ Armament Development and Test Center, Eglin AFB FL, and the Civil and Environmental Engineering Development Office. In February 1979, the Environics Division became part of the Engineering and Services Laboratory, Air Force Engineering and Services Center, Tyndall AFB FL.

This report is a compilation of the technical reports published by the Environics Division between 1967 and 1979.

All of the reports listed are available at the Defense Technical Information Center (DTIC) and most are also available at the National Technical Information Service (NTIS). They are not available at the Air Force Engineering and Services Center. Any questions concerning research reported in these documents should be addressed to the Environics Division, HQ AFESC/RDV, Tyndall AFB FL 32403, AUTOVON 970-2097.

SECTION II

ENVIRONICS PUBLICATIONS LIST
May 1968 to December 1979

PUBLICATION LIST: ENVIRONICS SECTION

<u>Document Number</u>	<u>Title</u>	<u>Author</u>	<u>Date</u>
1. Unnumbered	Preliminary Report on the Treatment of Photographic Waste with Ozone	Michael G. MacNaughton, Capt, USAF (BSC), and Dennis I. Hirota, Lt, USAF	May 1968
2. Unnumbered	Evaluation of Electrolysis for Producing Chlorine Residuals in Water	Michael G. MacNaughton, Capt, USAF (BSC)	Apr 1969
3. AFWL-TR-69-22	Rapid Instrumentation Methods for Water Pollution Analysis	Michael G. MacNaughton, Capt, USAF (BSC)	March 1969
4. AFWL-TR-69-121	Summary of Commercial Waste Treatment Plants	James A. Mahoney, PE	Sep 1969
5. AFWL-TR-70-97	Military Environics--Water Waste Water, and Solid Waste	James A. Mahoney, PE	Nov 1970
6. AFWL-TR-70-173	Incineration of Selected Industrial Wastes	Dennis I. Hirota, Capt, USAF	Jan 1971
7. AFWL-TR-71-2	Standards for Individual Aerobic Wastewater Treatment Plants	National Sanitation Foundation	Jan 1971
8. DE-TN-71-002	Evaluation of Bird-Strike Hazard at Charleston AFB, South Carolina	Rutherford C. Wooten, Capt, USAF	Feb 1971
9. AFWL-TR-71-3	Basic Criteria for the Evaluation of Special Processes or Devices Used in Treating Wastewaters	National Sanitation Foundation	Jan 1971
10. DE-TN-71-008	Proceedings-Environmental Engineering Meeting	Donald G. Silva, Major, USAF	April 1971
11. AFWL-TR-71-13	An Annotated Bibliography of Civil Engineering Research	Mary J. C. Garcia	Feb 1971

12. DE-TN- 71-13	Ecological Aspects of Bird-Aircraft Strike Hazards	Ronald J. Sobieralski, Sgt, USAF	Feb 1972
13. DE-TN- 71-013	Ozone Oxidation of Photographic Waste	Michael G. MacNaughton, Capt, USAF (BSC)	June 1971
14. DE-TN- 71-014	Recovery and Recycle of Photochemicals at the Aerospace Audio Visual Service Facility, Norton AFB, Calif.	D.D. Nelson, Capt,	June 1971
15. DE-TN- 71-016	Smoke Abatement System for Aircraft Crash-Reduce Training Fires, Interim Report	Capt James T. Haney	June 1971
16. DE-TN- 71-019	Proposed Management Con- cept for Environmental Pollution Control within AFSC	Lt Col C. Weinberg and Donald G. Silva Major, USAF (BSC)	1 July 1971 (Draft)
17. DE-TN- 71-020	Evaluation of a Small Incinerator for Film Destruction & Silver Recovery	Joseph J. Beres	July 1971
18. DE-TN- 71-21	USAF Air Mobility Pro- gram Wastewater Treatment Systems	V.L. Snoeyink, F.I. Markus, and B. S. Shin U. of Illinois	June 1971
19. DE-TN- 71-023	Preliminary Investi- gation of a Synthetic Media Filter	Capt Dean D. Nelson & Roger D. Murphy, Sgt, USAF	30 July 1971
20. DE-TN- 71-031	Preliminary Investi- gation of the Use of Hypochlorite Solutions for Film Declassification and Silver Recovery	Lt Richard E. Lotz & Edward C. Bishop, C/1c, USAFA	Jan 1972
21. DE-TN- 71-037	Evaluation of the Bird- Aircraft Strike Hazard at Shemya AFB, Alaska	R. C. Wooten, Capt; Ronald J. Sobieralski, Sgt; & Robert C. Beason, A1C	Oct 1971
22. DE-TN- 71-039	Preliminary Evaluation of Bird-Aircraft Strike Hazard at Howard AFB, CZ	Capt R. C. Wooten, Sgt William M. Floyd & A1c Robert C. Beason	n/d
23. AFWL-TR- 71-41	New Techniques for Pro- cessing of Municipal Refuse	Torsten Rothman, Major, USAF	April 1971

24. AFWL-TR- 71-51	Laboratory Investigation of a Fused Diatomaceous Earth Water Filter, Phase I	Peter I. Joseph, Major USAF VC, Geraldine L. Lemon, Sgt Erik K. Vermulen	April 1971
25. AFWL-TR- 71-63	Disposal of Electro- plating Wastes by Pre- cipitation and Recovery	Richard B. Lehmann, Calvin Patterson, UNM, CERF	June 1971
26. AFWL-TR- 71-119	Solid Waste Practices in the United States Air Force	Torsten Rothman, P.E., Major & Joseph J. Beres	Oct 1971
27. AFWL-TR- 71-169	USAF Mobility Program Wastewater Treatment System	V.L. Snoeyink, et al University of Illinois	April 1972
28. AFWL-TR- 71-184	Summary of Commercially Available Water Purifica- tion Systems	John T. O'Connor Vernon L. Snoeyink, University of Illinois & James A. Mahoney, AFWL	June 1972
29. DE-TN- 71-	Report of Bird Acoustics Tests at Holloman Air Force Base, New Mexico	Gordon W. Boudreau, Consultant	March 1971
30. AFWL-TR- 71	Annotated Bibliography of Stabilization Ponds	Sterling Schultz, Major, USAF	promised
31. DE-TN- 72-002	Chemical Wastes Generated by Air Force Photographic Operations	Lt Richard E. Lotz	Feb 1972
32. DE-TN- 72-006	Dispersion Modeling of Jet Engine Test Cell Emissions	Dennis F. Naugle, Capt	Feb 1972
33. DE-TN- 72-018	Preliminary Evaluation of Bird-Aircraft Strike at Beale AFB, California	Capt John P. Nemergut & A1C Robert C. Beason	Feb 1972
34. DE-TN- 72-021	Preliminary Evaluation of the Bird-Aircraft Strike Hazard at Sheppard AFB, TX	Lt Michael J. Boulder & A1C Robert C. Beason	June 1972
35. DE-TN- 72-022	Preliminary Evaluation of the Pest Bird Problem at Wright-Patterson AFB, Ohio	2nd Lt Michael J. Boulter & SSgt Ronald J. Sobieralski	June 1972

36. DE-TN-72-025	Evaluation of Bird-Aircraft Strike Hazard (Greater Prairie Chickens) at Whiteman Air Force Base, Missouri	Dr Jelle de Boer Research Scientist	July 1972
37. AFWL-TR-72-25	Flight Safety Aspects of Precision Radar Near Air Bases in Bird-Aircraft Collision Avoidance	Warren L. Flock University of Colorado	Oct 1972
38. DE-TN-72-029	Evaluation of a Fused Diatomaceous Earth Water Filter for Iron Removal	Donald G. Newton, Jr. Capt, USAF Roger R. Murphy, Sgt, USAF	Sept 1972
39. DE-TN-72-034	Dry Season Evaluation of the Bird-Aircraft Strike Hazard at Howard AFB, Canal Zone, Consultation Report No. 9	Robert C. Beason Sgt, USAF John P. Nemergut Capt, USAF	April 1972
40. AFWL-TR-72-45	Summary of Commercially Available Wastewater Treatment Plants	Mr Snoeyink & Mr James A. Mahoney	June 1972
41. AFWL-TR-72-58	Test and Evaluation of Multifrequency Air Conditioner Components for Air Force Inventory	Mr James A. Mahoney P.E.	June 1972
42. AFWL-TR-72-78	Disposal of Electro-plating Wastes by Cation Exchange	Richard B. Lehmann CERF	Sept 1972
43. AFWL-TR-72-93	Coring, Description, Mercury and Lead Analysis of Lake Bottom Sediments	Michael S. Hayner Capt, USAF	Nov 1972
44. AFWL-TR-72-125	Chemical Wastes Generated by Air Force Photographic Operations	Richard E. Lotz Lt, USAF	Sept 1972
45. AFWL-TR-72-166	Waterfowl Migration Corridors	Robert C. Beason, Sgt, USAF	Aug 1972
46. AFWL-TR-72-181	Treatment of Phenolic Aircraft Paint Stripping Wastewater	Ronald H. Kroop Lt, USAF	Jan 1973
47. AFWL-TR-72-194	CONE (Control of Noxious Effluents) Planning Conference	Donald G. Silva Major, USAF Dennis F. Naugle Capt, USAF	Nov 1972

48. AFWL-TR- 72-205	Evaluation of a Ferri-cyanide Bleach Recycling System	Keith Erb Harry Parsonage Mead Technology Lab	Nov 1973
49. AFWL-TR- 72-208	Investigation of a Fused Diatomaceous Earth Water Filter	D.D. Nelson Capt, USAF, BSC D. G. Newton Capt, USAF R. D. Murphy Sgt, USAF	Feb 1973
50. AFWL-TR- 72-209	Requirements for Explosion Proof Electrical Equipment in Aircraft Shelters	Lester A. Eggleston Michael D. Pish Southwest Rsch Inst	July 1973
51. AFWL-TR- 72-240	A Survey of Mathematical Techniques for Solid Waste Management	Dennis E. Lundquist Lt, USAF	March 1973
52. AFWL-TR- 72-241	Avian Hazards to the Air Force Rocket Sled Test Track, Holloman AFB, NM	Rutherford C. Wooten Capt, USAF Michael J. Boulter Lt, USAF William M. Floyd Sgt, USAF	Feb 1973
53. AFWL-TR- 72-249	USAF Mobility Program Water Treatment System	V. L. Snoeyink F. I. Markus University of Illinois	March 1973
54. AFWL-TR- 73-1	Iron Removal and Dechlorination of Water at Minuteman Launch Control Facilities	Dean D. Nelson Capt, USAF, BSC	March 1973
55. AFWL-TR- 73-4	Air Force Base Solid Waste Management Study	SCS Engineers	Aug 1973
56. AFWL-TN- 73-013	Evaluation of Bird-Aircraft Collision at Vance AFB, and Kegelman Auxiliary Field	Michael J. Boulter	April 1973
57. AFWL-TN- 73-014	Preliminary Evaluation of the Bird-Aircraft Collision Hazard at Ellington AFB, TX	Michael J. Boulter	April 1973
58. AFWL-TR- 73-16	The Bird-Aircraft Strike Hazard in the Canal Zone	Robert C. Beason	June 1973

59. AFWL-DE- TN-73-017	Evaluation of the Bird Aircraft Strike Hazard at Reese AFB, Texas	Dennis E. Compton Sgt, USAF Michael J. Boulter 1Lt, USAF George E. Meyer 1Lt, USAF	n/d
60. AFWL-TR- 73-18	Analysis of Jet Engine Test Cell Pollution Abatement Methods	F. L. Robson A. S. Kesten R. D. Lessard UARL	May 1973
61. AFWL-DE- TN-73-022	Evaluation of the Deer- Aircraft Collision Hazard at Vandenberg AFB, Calif	Dennis E. Compton Sgt, USAF	n/d
62. AFWL-DE- TN-73-025	Use of a Brominated Ion- Exchange Resin for Regen- eration of Photographic Ferricyanide Bleach Solutions	Richard E. Lotz 1st Lt	n/d
63. AFWL-DE- TN-73-026	Preliminary Evaluation of Bird-Aircraft Strike Hazard at Hill AFB, Utah	Robert O. Collum TSgt, USAF Bro. Edwin Mattingly, CSC, Univ. of Albuquerque	Oct 1973
64. AFWL-DE- TN-73-027	Preliminary Evaluation at Bird-Aircraft Strike Hazard at Williams AFB, Arizona	George E. Meyer 1Lt, USAF Dennis E. Compton Sgt, USAF	Dec 1973
65. AFWL-DE- TN-73-029	CONE (Control of Noxious Effluents) Planning Con- ference 5-6 Dec 72	Donald G. Silva Major, USAF	Nov 1973
66. AFWL-TR- 73-32	Gulls and USAF Aircraft Hazards	Rutherford C. Wooten Capt, USAF George E. Meyer Lt, USAF Ronald J. Sobieralski SSgt, USAF	April 1973
67. AFWL-TR- 73-33	Disposal of Aircraft Washrack Waste Water	Bruce D. Reinert	June 1973
68. AFWL-TR- 73-39	Cyanide Waste Treatment Utilizing Catalytic Oxidation	P.H. Woolhiser D.P. Clark Thiokol Chemical Corp Brigham City, Utah	Oct 1973
69. AFWL-TR- 73-69	Wastewater Sampling and Testing Instrumentation	T. F. Craft R. S. Ingols Georgia Inst. of Tech	July 1973

70. AFWL-TR- 73-80	Solid Waste Practices at Small Air Force Installa- tions and Bases Outside of the Contiguous United States	Joseph J. Beres Capt, USAF, BSC	June 1973
71. AFWL-TR- 73-96	Environmental Testing on Aircraft Shelters	Dennis F. Naugle Capt, USAF, BSC James T. Haney Capt, USAF, BSC George B. Carroll Capt, USAF, BSC	July 1973
72. AFWL-TR- 73-103	Design Analysis of an Air Force Environmental Pollution Field Labora- tory	H. W. Carlton E. H. Hall E. J. Mezey et al Battelle Columbus Lab	June 1973
73. AFWL-TR- 73-106	Quantitative Evaluation of Smoke Abatement System for Crash/Rescue Training Fires	James T. Haney Capt, USAF, BSC William T. Ristau UNM, CERF	May 1973
74. AFWL-TR- 73-120	Improving Air Force Base Refuse Collection Vehicle Routing	Dennis E. Lundquist Lt, USAF	July 1973
75. AFWL-TR- 73-124	Treatment of Electro- plating Wastes by Ion Exchange	Richard B. Lehmann Univ. of New Mexico	Aug 1973
76. AFWL-TR- 73-153	Study of Alternate Fuels and Water Spray injection as Methods of Smoke Abate- ment for Crash Rescue Training Fires	William T. Ristau Richard B. Lehmann	Dec 1975
77. AFWL-TR- 73-175	Falconry as a Means of Reducing Bird-Aircraft Strike Hazards at White- man Air Force Base, MI	Edwin Mattingly, Br., CSC, Univ. of Albuquerque	Jan 1974
78. AFWL-TR- 73-176	Film Destruction and Silver Recovery	William T. Ristau	Dec 1973
79. AFWL-TR- 73-190	An Annotated Biblio- graphy of Civil Engin- eering Research	Mary L. Foote AIC, USAF	Dec 1973
80. AFWL-TR- 73-193	Development and Appli- cation of Ion Exchange Silver Recovery System	Archie G. Buyers Edward R. Moss Gary R. Kramer	May 1974

81. AFWL-TR- 73-199	United States Air Force Aircraft Pollution Emissions	Dennis F. Naugle Capt, USAF, BSC Benard T. Delaney	Nov 1973
82. AFWL-TR- 73-212	Cyanide Disposal by Ozone Oxidation	Richard L. Garrison Charles E. Mauk H. William Prengle, Jr Houston Research, Inc.	Feb 1974
83. AFWL-TR- 73-219	Base Civil Engineer Sanitary Laboratory	Sterling E. Schultz Major, USAF USAF Academy	Dec 1973
84. AFWL-TR- 73-221	An Analysis of Classi- fied Film Destruction Methods which Recover Silver	George W. Baker Major, USAF	Dec 1973
85. AFWL-TR- 73-225	Computer Code for Complex Chemical Equil- ibrium Studies at Elevated Temperatures and Pressures	William T. Ristau Robert S. Pritchard Univ. of New Mex, CERF, Alburquerque, NM 87131	Aug 1974
86. AFWL-TR- 73-244	Combustion and Heat Recovery of Air Force Waste Petroleum Oils and Lubricants	Martin Lieberman ESSO Research	Feb 1974
87. AFWL-TR- 73-279	Treatability of Aqu- eous Film-Forming Foams Used for Fire Fighting	Ronald H. Kroop Lt, USAF Joseph E. Martin Sgt, USAF	Feb 1974
88. AFWL-TR- 73-283	Disposal/Recycle Management System Development for Air Force Waste Petroleum Oils and Lubricants	ESSO Research & Engineering Co Linden, NJ	April 1974
89. AFWL-TN- 74-003	Preliminary Evaluation of Bird-Aircraft Strike Hazard at Moody AFB, GA	Edwin Mattingly Univ. of Albuquerque Robert O. Collum TSgt, USAF	March 1974
90. AFWL-DE- TN-74-005	Selected Research and Development Projects in Environmental Quality	Melvin B. Dobbs Maj, USAF Michael G. MacNaughton Capt, USAF Dennis F. Naugle Capt, USAF James T. Haney Capt, USAF	March 1974

91. AFWL-TR- 74-9	Aviation Fuel Spill Containment Using Absorb- ent Materials	Eugene E. Mazewski Sgt, USAF Ronald H. Kroop Lt, USAF	March 1974
92. AFWL-TR- 74-11	A Review of Publications on the Bird-Aircraft Strike Hazard	Claude L. Scott ALC, USAF Rutherford C. Wooten, Jr., Capt, USAF	March 1974
93. AFWL-DE- TN-74-011	An Evaluation of the Bird-Aircraft Strike Hazard at the Hughes Air- port, Culver City, CA	John P. Nemergut Rutherford C. Wooten Capt, USAF	April 1975
94. AFWL-TR- 74-14	Development and Evalua- tion of Ion-Exchange Silver Recovery Pilot Plant	Edward R. Moss Archie G. Buyers UNM, CERF	March 1975
95. AFWL-TN- DE-74-014	Public Affairs Commen- taries on AFR 19-1, Pollution Abatement and Environmental Assess- ments/Statements	Capt Angelo Cerchione Office of Information Secretary of the Air Force	Sep 1974
96. ARL-TR- 74-0015	An Assessment of Instru- mentation and Monitoring needs for Significant Air Pollutants Emitted by Air Force Operations and Recommendations for Future Research on Analysis of Pollutants	Leo Parts William D. Ross Monsanto Research Corp. Robert E. Silvers Joseph J. Brooks Chemistry Research Corp.	1 Dec 1972 31 Jan 1974
97. AFWL-TR- 74-19	Biodegradability Invest- igation of a Nonphenolic Aircraft Paint Stripper	Ronald H. Kroop Lt, USAF Richard L. Jambor Sgt, USAF	May 1974
98. AFWL-DE- TN-74-019	An Evaluation of Pro- posed Methods for Analy- sis of Ferrocyanide	Dale H. Allen 2Lt	n/d
99. AFWL-TN- DEE- 74-023	Environmental Research within the Air Force	Lt Col D. G. Silva	Oct 1974
100. AFWL-TR- 74-24	A Generalized Air Quality Assessment Model for Air Operations-An Operator's Guide	Argonne National Laboratory	July 1974

101.	AFWL-TR-74-55	Apparatus and Procedure for Measuring Sublethal Toxicity of Wastewater Discharge	University of New Mexico (CERF), Albuquerque, NM 87106	July 1974
102.	AFWL-TR-74-70	LSW-500 Disposal of Air Force Liquid Wastes	Combustion Power Company, Inc.	April 1975
103.	AFWL-TR-74-111	Bird-Strike Hazard at the John F. Kennedy Space Center Runway	Robert C. Beason Sgt, USAF John P. Nemergut	July 1974
104.	AFWL-TR-74-112	Synthetic Resins and Activated Carbon for Treatment	Univ. of Illinois at Urbana, Urbana, Illinois	June 1974
105.	AFWL-TR-74-126	Hill AFB Prototype Smoke Abatement System for Crash/Rescue Training Fires	James T. Haney	April 1976
106.	AFWL-TR-74-129	Ecological Study Requirements for Vandenberg Air Force Base, CA	Rutherford C. Wooten Capt, USAF	July 1974
107.	AFWL-TR-74-145	The Application of Probability Calculations for Bird-Aircraft Strike Analysis and Predictions Using Radar	George E. Meyer	March 1975
108.	AFWL-TR-74-171	Practical Feasibility Evaluation of Combustion Waste Petroleum Oils and Lubricants in Existing Heating Plant Boilers	Ronald H. Kroop Capt, USAF Harold Elkin Major, USAF	Feb 1975
109.	AFWL-TR-74-174	A Seasonal Occurrence Check List of Waterfowl Hazardous to Flight Safety in Southwestern United States	Rutherford C. Wooten Capt, USAF, BSC	March 1975
110	AFWL-TR-74-175	A Radar and Direct Visual Study of the Hazard to Aircraft from Bird Migrations in the Southwest	Robert C. Beason	March 1975
111.	AFWL-TR-74-196	A Review of the Influence of Weather on Bird Migration	Robert C. Beason Sgt, USAF	March 1975

112. AFWL-TR- 74-215	Environmental Analysis of Possible Sulfur Incre- ases in USAF Jet Fuels	Dennis F. Naugle Capt, USAF, BSC	Feb 1975
113. AFWL-TR- 74-279	USAF Aircraft Takeoff Length Distances Climb- out Profiles	David F. Menicucci	Oct 1974
114. AFWL-TR- 74-303	USAF Aircraft Pollu- tion Emission Factors and Landing and Takeoff (LTO) Cycles	Dennis F. Naugle Steven R. Nelson	Feb 1975
115. AFWL-TR- 74-304	A Generalized Air Quality Assessment Model for Air Force Operations	Donald M. Rote Lawrence E. Wangen Argonne Nat'l Lab	Feb 1975
116. AFWL-TR- 74-319	Seventh Annual Coordi- nation Meeting of Govern- ment Representation Dealing with Research Efforts in Aircraft Pollu- tion	Russell D. Glenn Capt, USAF	Jan 1975
117. AFWL-TR- 74-507	Pollution Emission Analysis of Selected Air Force Aircraft	D. F. Naugle Capt, USAF, BSC	Sep 1974
118. AFWL-TR- 74-508	Development of an Air Force Quality Assessment Model (AQAM)	D. F. Naugle Capt, USAF, BSC	Sep 1974
119. AFWL-DE- TN-75-001	Remote Air Pollution Monitoring and Its Appli- cability to USAF Needs	Capt Richard A. Wallner, Applied Research Branch/AFWL	Jan 1975
120. AFWL-DE- TN-75-02	Project Crested Isle Air Quality Analysis	Dennis F. Naugle Capt, USAF	Feb 1975
121. AFWL-IR- 75-160	Potential Bird Hazards During the Oversea Phase of the B-1 Flight Test Program	Dennis E. Compton John P. Nemergut Keith R. Newson	July 1975
122. AFWL-TR- 75-161	Evaluation of the Bird- Aircraft Strike Hazards at Seymour Johnson AFB, North Carolina	John P. Nemergut Rutherford C. Wooten Maj, USAF Robert O. Collum, TSGt, USAF	March 1976
123. AFWL-TR- 75-220	Air Quality Assessment Model (AQAM) Field Data Collection Guide	Bernard Tod Delaney	Aug 1975

124.	AFWL-TR- 75-234	Development of High Pressure Liquid Chromat- ographic Techniques	Edward A. Walters	n/d
125.	AFCEC-TR- 75-04	Continuous On-Line Moni- toring of Total Cyanides	B. P. Bennett	Jan 1975
126.	AFCEC-TR- 75-6	Advanced Trickling Filter Wastewater Treatment	E. W. Leschber	Aug 1975
127.	AFCEC-TR- 75-9	The Evaporation and De- gradation of N-Nitroso Dimethylamine in Aqueous Solutions	Michael G. MacNaughton Thomas B. Stauffer	Mar 1975
128.	AFCEC-TR- 75-11	Efficiency of Silver Re- covery from Air Force Photographic Operations	Brain D. Bennett	Jul 1975
129.	AFCEC-TR- 75-14	Activated Carbon Treat- ment of Phenolic Paint Stripping Wastewater	Anthony E. Perrotti	Aug 1975
130.	AFCEC-TR- 75-15	Vapor Phase Spectra for Air Pollution Studies	Robert R. Birge James T. Haney Edward Ricco	Aug 1975
131.	AFCEC-TR- 75-16	Continuous On-Line Moni- toring of Total Organic Carbon	Brain D. Bennett	Aug 1975
132.	AFCEC-TR- 75-17	The Adsorption of Chro- mium (VI) at the Oxide/ Water Interface	Michael G. MacNaughton	Sep 1975
133.	AFCEC-TR- 75-21	Air Force Fuel Dumping: October 1974 to March 1975		Aug 1975
134.	AFCEC-TR- 75-28	A Methodology for Pre- planning Environmental Statements	David I. Hellstrom	Aug 1975
135.	AFCEC-TR- 76-2	Waste POL Disposal Through Energy Recovery	Patrick t. Bink Jerry W. Jackson	Jun 1976
136.	AFCEC-TR- 76-06	Treatment and Recycle of Photographic Bleach Solution Using Elect- rolytic Regeneration	R. D. Bennett	Jan 1976
137.	AFCEC-TR- 76-09	A Methodology for Prepar- ing Environmental Assess- ments	D. I. Hellstrom	Nov 1976

138.	AFCEC-TR- 76-10	Improved Efficiency for Kirtland AFB Solid Waste Collection	D. E. Lundquist	Jan 1976
139.	AFCEC-TR- 76-11	The Reduction of F-111 Low-Level Enroute Bird Hazards	D. E. Compton	Mar 1976
140.	AFCEC-TR- 76-12	Theater Air Base Threat Assessment	Morrison	Dec 1975
141.	AFCEC-TR- 76-13	Ozone Oxidation of Metal Plating Cyanide Wastewater	Dean A. Johnston	Apr 1976
142.	AFCEC-TR- 76-14	Evaluation of IBM Vehicle Sched. Program for AF Base Refuse Collection Schedule	H. J. Iuzzolino	Apr 1976
143.	AFCEC-TR- 76-15	Ecological Assessment of Vandenberg AFB CA Vol I	H. N. Coulombe C. R. Maholdt	May 1976
144.	AFCEC-TR- 76-15	Ecological Assessment of Vandenberg AFB CA Vol II	R. Wooten H. N. Coulombe C. R. Maholt	May 1976
145.	AFCEC-TR- 76-15	Ecological Assessment of Vandenberg AFB, Vol III	R. M. Riley C. F. Cooper F. P. Statz	Sep 1976
146.	AFCEC-TR- 76-17	Dev of a Doppler Radar Technique for the Detection of Bird Hazards to Aircraft	J. L. Green B. B. Bolsey	Dec 1975
147.	AFCEC-TR- 76-20	Source Emission Inventory for AFMAD: Review of Field Data Collection Program	Viezee Simmon Shelar Hackworth	Jul 1976
148.	AFCEC-TR- 76-21	A Review of Publications on the Bird Aircraft Strike Hazard, Part II	A. S. Moorehead P. R. McCracken	Jul 1976
149.	AFCEC-TR- 76-22	Influence of the Sedi- ment Water Interface on Aquatic Chemistry of Heavy Metals	T. Gilbert M. C. Clay D. A. Leighty New England Aquarium	Jun 1976

150. AFCEC-TR-	Development of Contou- ring Capability for Displaying Results of AQAM	E. P. Danphy	Oct 1976
76-25			
151. AFCEC-TR-	Development of High Pressure Liquid Chromatographic Techni- ques	R. D. Caton, Jr. J. R. Matthews E. A. Walters	Oct 1976
76-26			
152. AFCEC-TR-	Methodology for Air Force Optimization of Solid Waste Management	R. F. Olfenbuttel	Sep 1976
76-29			
153. AFCEC-TR-	Treatment of N-Nitro- sodimethylamine Contami- nated Waste with Activated Carbon	M. G. MacNaughton Thomas B. Stauffer	Jul 1976
76-32			
154. AFCEC-TR-	Effect of Navy and AF Aircraft Engine Test Facilities on Ambient Air Quality	B. C. Grems, III D. F. Naugle	Oct 1976
76-36			
155. AFCEC-TR-	An Evaluation of Cla- docera as a Bioassay Organism		Jun 1976
76-37			
156. AFCEC-TR-	Evaluation of Reverse Osmosis for Electro- plating Wastes	D. H. Allen E. C. Frein	Dec 1976
76-42			
157. AFCEC-TR-	NDMA Treatability Studies	S. P. Shelton	Dec 1976
76-43			
158. AFCEC-TR-	Evaluation of Activated Carbon for Fuel Oil Absorption from a Port- able Water Supply	D. H. Allen	Oct 1976
76-46			
159. AFCEC-TR-	Prediction of Test Cell Visible Emissions	S. P. Finch A. W. Eyl	Dec 1976
76-47			
160. AFWL-TR-	A Computerized Edit Program for the Air Quality Assessment Model (AQAM)	David F. Menicucci	n/d
76-68			
161. AFCEC-TR-	Community Noise Exposures Robinson Resulting from Aircraft Operations		
77-08			
162. AFCEC-TR-	Pollutant Generation by Air Force Electroplating Facilities	P. S. Daley	Jun 1977
77-10			

163.	AFCEC-TR- 77-11	An Approach to Managing Energy Conservation	N.B.S.	Apr 1977
164.	AFCEC-TR- 77-12	Technical Guidelines for Energy Conservation	N.B.S.	June 1977
165.	AFCEC-TR- 77-16	CB Warfare: CBW Collec- tive Protection Facilities Engineering Guide	R. G. Perry	Apr 1977
166.	CEEDO-TR- 76-23	Air Quality Impact of Aircraft at Ten USAF Bases	D. Naugle	Apr 1977
167.	CEEDO-TR- 76-33	AQAM for AF OPS-Source Emission Inventory Compu- ter Code Documentation	D. J. Bingaman L. E. Wangen	Apr 1977
168.	CEEDO-TR- 76-34	AQAM for AF OPS-Short Term Emission/Dispersion Computer Code Documentation	D.J. Bingaman	Apr 1977
169.	CEEDO-TR- 76-35	AQAM for AF OPS-Long Term Emission/Dispersion Computer Code Documentation	D. J. Bingaman	Apr 1977
170.	CEEDO-TR- 76-44	Chemical Coagulation Dosage Control	S. P. Shelton	Dec 1976
171.	CEEDO-TR- 77-01	A Theory on Water Filtration, Part I	S. P. Shelton	Jan 1977
172.	CEEDO-TR- 77-02	A Theory on Water Filtration, Part II	S. P. Shelton	Jun 1977
173.	CEEDO-TR- 77-03	A Theory on Water Filtration, Part III	S. P. Shelton	Jun 1977
174.	CEEDO-TR- 77-04	Evaluation of A Brom- inated Resin System for Ferricyanide Bleach Regeneration	Dale Allen	Jan 1977
175.	CEEDO-TR- 77-09	Chlordane Volatility	T. B. Stauffer	May 1977
176.	CEEDO-TR- 77-10	Pollutant Generation By Air Force Electroplating Processes	Peter S. Daley	Jun 1977
177.	CEEDO-TR- 77-13	The Role of Iron Sul- fides in Controlling Trace Heavy Metals in Anaerobic Sediment	J. O. Leckie, J. A. Davis IV M. B. Nelson M. M. Benjamin Stanford University	Feb 1977

178.	CEEDO-TR- 77-15	WQAM Oxygen Dynamics Model for Low Flow Streams	S. P. Shelton	Mar 1977
179.	CEEDO-TR- 77-18	Dev of Regn Math Model for Pred. Change in Stream Flow Quantity and Quality	S. P. Shelton D. E. Overton R. A. Minear	Jan 78
180.	CEEDO-TR- 77-19	Cascade Water Reuse	C. J. Schmidt E. V. Clements, III S. P. Shelton	Jul 1977
181.	CEEDO-TR- 77-23	Evaluation of a New Trickling Filter Media	D. H. Allen	Jul 1977
182.	CEEDO-TR- 77-24	Evaluation of the KMU 450/F Mod Kit during TAC Project 77G-016T, April 1977	R. G. Perry	Jun 1977
183.	CEEDO-TR- 77-25	Air Classification of Municipal Type Solid Waste	P. J. Sweeney	Jun 1977
184.	CEEDO-TR- 77-29	A New Concept in Sludge Filtration Theory for Industrial Application	S. P. Shelton	Jun 1977
185.	CEEDO-TR- 77-32	Refuse Collection Schedu- ling Program	H. J. Iuzzolino E. H. Wang	Jan 1978
186.	CEEDO-TR- 77-33	Impact of Space Shuttle Support Facilities on Special Interest Plant Species	R. C. Wooten	Sep 1977
187.	CEEDO-TR- 77-34	Second Interim Technical Report on USAFA Solar Test House	Anthony Eden J. Tinsely	Sep 1977
188.	CEEDO-TR- 77-35	Building Loads Analysis and Systems Thermodynamics (Blast) Vol I Users Manual	D. C. Hittle	Dec 1977
189.	CEEDO-TR- 77-36	Building Loads Analysis and Systems Thermodynamics (Blast) Vol II for 77-35 Program Reference Manual	D. C. Hittle	Dec 1977
190.	CEEDO-TR- 77-37	Published as Vol II TR-77-35: Program Reference Manual	D. C. Hittle	Dec 1977
191.	CEEDO-TR- 77-38	Building Energy Analysis Tools and Procedures	D. C. Hittle	May 1978

192.	CEEDO-TR- 77-40	Smoke Abatement for DOD Test Cells	B. Grems	Jul 1977
193.	CEEDO-TR- 77-48	Sampling Submicrometer Particles in Near Sonic and Supersonic Free Jets	J. A. Martone P. S. Daley R. W. Boubel	Oct 1977
194.	CEEDO-TR- 77-52	Identification and Characterization of Elements for an AF Range Planning Document	D. Armstrong	Nov 1977
195.	CEEDO-TR- 77-54	Refuse Collection Scheduling for Selected Locations, Vol I, Offutt AFB NB	H. J. Iuzzolino E. H. Wang	Nov 1977
196.	CEEDO-TR- 77-54	Refuse Collection Scheduling for Selected Locations, Vol II, Hill AFB UT	H. J. Iuzzolino E. H. Wang	Nov 1977
197.	CEEDO-TR- 77-54	Refuse Collection Scheduling for Selected Locations, Vol III, Fairchild AFB, WA	H. J. Iuzzolino E. H. Wang	Nov 1977
198.	CEEDO-TR- 77-54	Refuse Collection Scheduling for Selected Locations, Vol IV, Robins AFB GA	H. J. Iuzzolino E. H. Wang	Nov 1977
199.	CEEDO-TR- 77-57	Photographic Measure- ments of USAF Aircraft Plume Rise	P. D. Music J. S. Hunt D. F. Naugle	Nov 1977
200.	CEEDO-TR- 78-01	Development of High Pressure Liquid Chromato- graphic Techniques (Phase II)	J. R. Matthews G. D. Pierce	Apr 1978
201.	CEEDO-TR- 78-11	Oxidation of Hydrazine in Aqueous Solutions	M. G. MacNaughton S. E. Bowen	Mar 1978
202.	CEEDO-TR- 78-12	Studies on Evaporation of Hydrazine and Procedures for Cleanup of Small Spills	Thomas B Stauffer Arland WS. EYL, Jr.	Aug 1978
203.	CEEDO-TR- 78-14	Proceedings of the Conference on Environ- mental Chemistry of Hydrazine Fuels	Det. 1 (CEEDO) ADTC	Mar 1978

204. CEEDO-TR- Optimum Dewatering and
78-15 Metal Recovery of Metal
Plating Waste Sludges J. T. Novak Mar 1978
J. Holroyd
S. Pattengill
M. M. Ghosh
205. CEEDO-TR- The Autoxidation of
78-17 Hydrazine Vapor D. A. Stone Jan 1978
- 206.
207. CEEDO-TR- Subisokinetic Sampling
78-20 Errors for Aircraft Tur-
bine Engine Smoke Probes J. A. Martone Apr 1978
208. CEEDO-TR- AF Refuse Collection
78-23 Scheduling Program
Description, Vol I:
Program RCINPT H. J. Iuzzolino Apr 1978
E. H. Wang
209. CEEDO-TR- AF Refuse Collection
78-23 Scheduling Program
Description, Vol II:
Program Phase 2 H. J. Iuzzolino May 1978
E. H. Wang
210. CEEDO-TR- AF Refuse Collection
78-23 Scheduling Program
Description, Vol III:
Program Phase 3 H. J. Iuzzolino Jun 1978
E. H. Wang
211. CEEDO-TR- AF Refuse Collection
78-23 Scheduling Program
Description, Vol IV:
Program Phase 4 H. J. Iuzzolino Jul 1978
E. H. Wang
212. CEEDO-TR- Feas of Control Turbine
78-24 Engine Test Cell Parti-
culate Emissions with
a Baghouse J. R. Geiger Sep 1978
P. S. Daley
213. CEEDO-TR- Transportable Wastewater
78-25 Advanced Refinement and
Demonstration System Neil D. Williams Oct 1978
Robert G. Perry
James Matthews
214. CEEDO-TR- Analysis of Air Force
78-28 Solid Waste Management
Practices R. O. Olfenbuttel May 1978
215. CEEDO-TR- Evaporation and Disper-
78-30 sion of Hydrazine Propel-
lants from Ground Spills G. Ille Aug 1978
C. Springer

216.	CEEDO-TR- 78-32	Third Interim Technical Report on USAF A Solar Test House Design Parameters	USAF Academy	Sep 1978
217.	CEEDO-TR- 78-33	Aircraft Air Pollution Emission Estimation Techniques - ACEE	Harold A. Scott, Jr. Denise F. Naugle	Sep 1978
218.	CEEDO-TR- 78-34	USAF Turbine Engine Emission Survey Vol I: Test Summaries	P. S. Daley A. F. Souza	Aug 1978
219.	CEEDO-TR- 78-34	USAF Turbine Engine Emission Survey, Vol II Individual Eng Test Rpt	P. S. Daley A. F. Souza	Aug 1978
220.	CEEDO-TR- 78-34	USAF Turbine Engine Emission Survey, Vol III Engine Model Summaries	P. S. Daley A. F. Souza	Aug 1978
221.	CEEDO-TR- 78-35	Air Quality Analysis of Possible F15 and A10 Aircraft Eng Mods to Reduce Pollution	P. S. Daley	Jun 1978
222.	CEEDO-TR- 78-36	Measurement and Analysis of Airport Emissions	P. S. Daley	Sep 1978
223.	CEEDO-TR- 78-37	J-57-59W Engine Emission Test Report	H. A. Scott A. F. Souza	Jul 1978
224.	CEEDO-TR- 78-41	Flame-Forestry Lands Allocated for Managing Energy	J. D. Lowther	Sep 1978
225.	CEEDO-TR- 78-43	The Ozone Oxidation of Hydrazine Fuels	R. A. Sieka W. F. Cowen	Sep 1978
226.	CEEDO-TR- 78-47	Geothermal Potential at U. S. Air Force Bases	C. F. Austin J. A. Whelan	Nov 1978
227.	CEEDO-TR- 78-48	Removal of Trichloroethylene Contamination from Drinking Water at a USAF Installation	R. G. Perry	Jul 1978
228.	CEEDO-TR- 78-49	Solid Waste Source Separation Test at Vandenberg AFB, CA, Phase II: Characterization of In-put Solid Waste Management System	C. J. Ward J. L. Squier	Dec 1978

229.	CEEDO-TR- 78-50	Review of Toxic Spill Modeling	Barry A. Benedict	Nov 1978
230.	CEEDO-TR- 78-51	Particle Collection by Water Injection in Test Cells	P. S. Daley D. A. Lundgren	Nov 1978
231.	CEEDO-TR- 78-53	Low Efficiency Control Measures for Jet Engine Test Cells	D. A. Lundgren	Sep 1978
232.	CEEDO-TR- 78-54	F-100 Turbine Engine After Burner Emission Tests	A. F. Souza H. A. Scott, Jr.	Sep 1978
233.	CEEDO-TR- 78-55	Hydrazine Disposal by Burning	T. B. Stauffer M. D. Fannon	Dec 1978
234.	CEEDO-TR- 79-03	Advanced Catalytic Com- bustors for Low Pollutant Emissions	W. J. Dodds	Nov 1979
235.	CEEDO-TR- 79-05	JP-4 Fuel Storage Emissions	T. B. Stauffer	Dec 1978
236.	CEEDO-TR- 79-06	Evaluation of Fuel Character Effects NJ-59 Engine Combustion System	C. C. Gleason T. L. Oller M. W. Shayeson D. W. Bahr	Jun 1979
237.	CEEDO-TR- 79-07	Evaluation of Fuel Character Effects on the F101 Engine Com- bustion System	C. C. Gleason T. L. Oller M. W. Shayeson D. W. Bahr	Jun 1979
238.	AFESC ESL TR-79-02	RACUZ Descriptor Application Methodology	Donald R. Myrick	May 1979
239.	AFESC ESL TR-79-03	Control of JP-4 Emissions from Underground Storage Tanks	G. A. Lewandowski T. B. Stauffer	Apr 1979
240.	AFESC ESL TR-79-09	Metal Hydroxides from Electroplating and Sludge Characterization and Metal Recovery	J. T. Novak Thomas Clevenger M. M. Ghosh C. Yen W. Knoche	May 1979
241.	AFESC ESL TR 79-10	The Autoxidation of Monomethylhydrazine Vapor	D. A. Stone	Apr 1979

242.	AFESC ESL Biodegradation of TR-79-11 Phenolic Paint-Stripping Waste	H. D. Cobb, Jr. J. W. Egan W. E. Oliver, Jr. D. J. Hansen	May 1979
243.	AFESC ESL Study in Remote TR-79-15 Sensing for Land Use	R. D. Shinn F. V. Westerlund	Jun 1979
244.	AFESC ESL User Guide for the Air TR-79-16 Force Base Automotive Transportation Simulation (BATS) Vol I	M. Duffey-Armstrong Susan Swope Richard Sandys	Sep 1979
245.	AFESC ESL User Guide for the Air TR-79-16 Force Base Automotive Transportation Simulation (BATS) Vol II	Richard Sandys	Sep 1979
246.	AFESC ESL User Guide for the Air TR 79-16 Force Base Automotive Transportation Simulation (BATS) Vol III	Richard Sandys	Sep 1979
247.	AFESC ESL Control of Particulate TR-79-19 Emissions from Turbine Engine Test Cells by Cooling Water In- jection	M. G. MacNaughton J. J. Tarquinio J. A. Martone	Jul 1979
248.	AFESC ESL Analysis of Remote Site TR-79-20 Energy Storage and Generation Systems	J. N. Crisp W. S. Bishop J. D. Pinson L. A. Anderson	Jul 1979
249.	AFESC ESL Survivability of Remote TR-79-21 Site Alternate Energy Systems - Vol I	Karl E. Scheuch Glenn T. Baird	Sep 1979
250.	AFESC ESL Survivability of Remote TR-79-21 Site Alternate Energy Systems - Vol II	Karl E. Scheuch Glenn t. Baird	Sep 1979
251.			
252.	AFESC ESL Methodology for Preparing TR-79-24 an Air Force Range Planning Document		
253.	AFESC ESL A Review of the Pre- TR-79-25 liminary Range Planning Methodology Test at Edwards AFB	William H. Liskamm Thomas M. Spight S. M. Tatsumo	Dec 1979

- | | | |
|---|--|----------|
| 254. AFESC ESL Aerosol Filter Loading
TR-79-28 Data for a Simulated Jet
Engine Test Cell Aerosol | Dale A. Lundgren | Aug 1979 |
| 255. AFESC ESL Soot Control by Fuel
TR-79-32 Additives -- A Review | Jack B. Howard
William J. Kausch, Jr. | Sep 1979 |
| 256. AFESC ESL Solar Isolation Record-
TR-79-34 ing System (SIRS)
Reference Manual | E. E. Stapleton
M. R. Mantz | Dec 1979 |
| 257. AFESC ESL Biological Degradation
TR-79-38 of Hydrazine | M. G. MacNaughton
J. A. Farmwald
L. McDaniels
G. Urda | Oct 1979 |
| 258. AFESC ESL The Effects of Amine
TR-79-39 Based Missile Fuels
on the Activated Sludge
Process | M. G. MacNaughton
J. A. Farmwald | Oct 1979 |

INITIAL DISTRIBUTION LIST

OASD(I&L)EES	1	HQ USAFE/SGB	1
OUSDR&F	1	HQ UASFE/DEVS	1
OUSDR&E	1	HQ USAFE/DEPV	1
OSAF/MIQ	1	USAF Hospital Wiesbaden/SGB	1
DTIC/DDA	2	AUL/LSE 71-249	1
ARPA	1	HQ USAFA/Library	1
OSAF/PA	1	AFRES/SGB	1
HQ USAF/LEEV	1	AFRES/DE	1
HQ USAF/LEEV	1	USAFFS/DEE	1
HQ USAF/SGPA	1	USAFCRCE/WR/DEEV	1
HQ USAF/LGYF	1	USAFCRCE/CR/DEEV	1
HQ USAF/SGES	1	USAFCRCE/ER/DEEV	1
HQ USAF/LEEEV	1	U S Army, MIRADCOM	1
AFMSC/SGPA	1	Cmdr, USA Med Bioengrg R&D Lab	1
HQ AFSC/DLWM	1	USA Chief, R&D/EQ	1
HQ AFSC/DLFP	1	USN, Chief R&D/EQ	1
HQ AFSC/SD	1	SAMTEC/SEM	1
HQ AFSC/DEV	1	AFRPL/Library	1
HQ AFSC/SGB	1	AFRPL/LK	1
HQ AFSC/SGPA	1	AFATL/DLODL	1
AMD/RD	1	AFWL/SUL	1
AMD/RDB	1	AFTEC/SGB	1
AMD/RDU	1	HQ SAC/DEPA	1
OEHL/CC	5	HQ SAC/DEPV	1
USAFSAM/EDE	5	HQ SAC/SGPA	1
USAFSAM/VNL	1	1 STARD/SEM	1
AEDC/DYR	1	USAF Hospital Vandenberg/SGP	1
AEDC/DDTR	1	HQ TAC/SGPA	1
AEDC/DOTR	1	HQ TAC/DEEV	1
AFOSR/CC	1	SA-ALC/SFQ	1
AFOSR/NL	1	SA-ALC/SGP	1
AFOSR/NP	1	OC-ALC/SGP	1
AFOSR/NA	1	USAF Hospital Robins/SGPB	1
AFOSR/NC	1	OG-ALC/SGP	1
SD/SGX	1	Ch, Pollution Abatement Br	1
SD/DEV	1	NAVFAC Code 111	
SD/LV-1	1	NESO	1
HQ MAC/SGPE	1	NCEL, Code 15111	1
HQ MAC/DEFV	1	Commandant/GDD, USCG	1
HQ MAC/DEEE	1	HQ NASA, Code MAS-7	1
HQ ATC/SGPAP	1	NASA/DL-DED-32	1
HQ ATC/SGB	1	DD-MED-41	1
HQ ATC/DEFV	1	NASA/MD-E	1
HQ ATC/DEPV	1	NASA Lewis Research Ctr (MS60-6)	1
HQ PACAF/SGPE	1	FAA/AEE-300	1
HQ PACAF/DEEV	1	FAA/ARD-550	1
HQ PACAF/DEMU	1	FAA/AEQ-10	1
OL-AD; USAF OEHL	1	ANGSC/DEV	1
HQ AFISC/SG	1	Library, Chemical Abstracts Svc	1
HQ AAC/SGB	1	Toxic Matls Information Ctr	1
HQ AAC/DEFV	1	Argonne National Lab	1
HQ AAC/DEV	1	HQ AFESC/DEV	1

INITIAL DISTRIBUTION LIST (Cont'd)

HQ AFESC/TST	1
HQ AFESC/WE	1
HQ AFESC/RDV	35
AFGL/LKD	1
Naval Air Propulsion Ctr	1
USA Environ Hygn Agency/ENGMC-RD	1
EPA/ESRL-MD-46	1
EPA, Pacif NW Env Res Lab	1
EPA/ORD	1
EPA Env Res Lab	1
EPA/SDSB	1
NEPSS	1
AVRADCOM/DAVDL-ATL-ATP	1
USCG (G-WEP-1/73)	1
NAFEC/ANA-420	1
AERO/Code 64240 NARF	1
AFWAL/POSF	1
AFWAL/POTC	1
AFWAL/THE	2
AFWAL/SFF	1
AFWAL/TBC	1
AFIT/Library	1
AFIT/DE	1
AFIT/DEM	1
AFIT/LSGM	1
ASD/YPLL	1
ASD/YZEA	1
ASD/AEL	1
ASD/DES	1
ASD/DEP	1
FTD/LGM	1
HQ AFLC/SG	1
HQ AFLC/SGB	1
HQ AFLC/DE	1
HQ AFLC/DEEPV	1
HQ AFLC/DEPV	1
HQ AFLC/IGYG	1
HQ AFLC/MAXT	1
USAF Hosp Wright Patterson/SGPB	1